## REMARKS

Claims 1 and 3-27 are pending in the application. Claims 1 and 3-27 are rejected.

**Reply to the Rejection of Claims 1 and 3-27 under 35 U.S.C. § 103(a)**

The Examiner has rejected Claims 1 and 3-27 as being unpatentable over U.S. Patent No. 6,228,126 to Cimecioglu *et al.* ("Cimecioglu") in view of U.S. Patent No. 5,698,688 to Smith *et al.* ("Smith") or U.S. Patent No. 6,409,881 to Jaschinski ("Jaschinski"). Specifically, the Examiner states –

> Cimecioglu et al. teach aldehyde modified fibers for papermaking use with all the limitations of the claimed fibers. Cimecioglu et al. do not implicitly teach the fluffing of such fibers nor the use of the fibers as such, fluffed, for absorbent products. However, Both Smith et al. and Jaschinski, as discussed above teach that aldehyde modified fibers can be used as fluff, i.e., the fibers can be fluffed and used in absorbent structures such as diapers, pantiliners etc, (fibers used in those applications are fluffed for additional wicking, bulk and fluid retention). Therefore, fluffing Cimecioglu et al. fibers for making the incontinent articles as taught by Smith et al. would have been obvious to one of ordinary skill in the art, since he/she would have reasonable expectation of success if the fibers are fluffed as taught by Smith et al. Note that Cimecioglu et al. teach the same degree of aldehyde in the fibers and the same type of additives, i.e., TEMPO and TEMPO derivatives. . . .
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> . . . . The Examiner contends that one of ordinary skill in the art would have reasonable expectation of success if the fibers taught by Cimecioglu et al. are fluffed as suggested by the secondary references, i.e., Smith et al. and Jaschinski.
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> Applicants argue that none of the references teach or suggest the increased wicking rate and capacity and/or the structural integrity of the fluff pulp as claimed. This is not convincing because, the fluff pulp resulting from the combination of the teachings of the cited references would inherently have the same properties as claimed. Note that the claims do not recite any range of the claimed properties which could be considered out the range of the combination of the cited references and therefore, unexpected results cannot be argued. Furthermore, claim 18 does not even require any degree of aldehyde modification.

For the following reasons, Applicants respectfully traverse the Examiner's rejection of claims 1 and 3-27 as being unpatentable over Cimecioglu in view of Smith or Jaschinski.

Cimecioglu, Smith and Jaschinski have been previously discussed in detail, those arguments being incorporated herein.

As previously noted, Cimecioglu teaches paper that is prepared from aldehyde modified cellulose pulp having from 1 to 20 mmoles of aldehyde per 100 g of cellulose (col. 2, lines 30-32, 44-46 and 59-63; col. 5, lines 25-29). The pulp is prepared by reacting cellulose material in an aqueous solution with an oxidant, wherein the oxidation is mediated with a nitroxyl radical such as TEMPO or 4-acetamido-TEMPO (col. 2, lines 38-46; *see also*, Examples 1 and 2 and claim 1). The modified cellulose pulp of Cimecioglu produces paper with improved wet and dry tensile strength; however, Cimecioglu does not teach the use of its pulp in absorbent products, nor does Cimecioglu teach or suggest fluffing its modified pulp.

Briefly, Smith discloses a two-step process for forming aldehyde-modified cellulosic fibers – (1) esterifying cellulose with an olefin containing carboxylic acid or acid derivative to produce an intermediate cellulosic fiber, and then (2) oxidizing the fiber to form the resultant aldehyde-modified cellulosic fiber. Smith teaches oxidizing the alkene groups substituted on the fiber, *i.e.*, oxidizing the double bond to an aldehyde. In contrast to Smith, the present invention teaches oxidation of a hydroxyl group to an aldehyde directly on the cellulose. Therefore, both the aldehyde-modified fiber products of Smith and their method of manufacture are completely different from the fibers of the present invention.

Further, Smith only teaches improved wet and dry tensile strength of paper products made with its aldehyde-modified cellulosic fibers. Smith does not teach or suggest modified fluff pulp that has improved wicking rate and capacity, improved structural integrity, and/or improved absorbent capacity.

Smith only suggests that its fibers can be used in fluffed products, but makes no teaching or suggestion to fluff its fibers. Further, Smith does not teach or suggest how its fibers can be used in fluffed products, *i.e.*, the fibers could be used in a portion of the product not fluffed, *e.g.*, the paper lining. Such an application would be consistent with the teachings of Smith, as Smith is directed towards improving paper strength, not paper absorbency. Therefore, one cannot claim that Smith inherently teaches fluffing its fibers as the application of Smith's fibers (*i.e.*, where those fibers are used) in fluffed products is not taught by Smith.

Smith also teaches that its aldehyde-modified cellulosic fibers can be used with other papermaking fibers, including modified cellulosic fibers (col. 7, line 64 – col. 8, line 14).

Accordingly, one skilled in the art would believe that the modified cellulosic fibers of Smith are present in "sanitary napkins, tampons, diapers, etc." for wet and dry strength improvements.

The products of Jaschinski are created from oxidized fibers that have been crosslinked with metal. Crosslinking the oxidized fibers with metal increases the strength of the product for use in paper applications (col. 15, line 67 - col. 16, line 9). Crosslinked cellulose fibers and their enhanced absorbency ability are well known in the art. However, the present invention addresses the need for absorbent articles without crosslinked fibers. Further, Jaschinski provides no teaching regarding improved wicking rate and wicking capacity, structural integrity, absorbent capacity, and/or odor absorption. Jaschinski also does not teach fluffing its crosslinked fibers.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983). "In determining whether the invention as a whole would have been obvious under 35 U.S.C. 103, we must first delineate the invention as a whole. In delineating the invention as a whole, we look not only to the subject matter which is literally recited in the claim in question... but also to those properties of the subject matter which are inherent in the subject matter *and* are disclosed in the specification. . . Just as we look to a chemical and its properties when we examine the obviousness of a composition of matter claim, it is this invention *as a whole,* and not some part of it, which must be obvious under 35 U.S.C. 103." *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6,8 (CCPA 1977) (emphasis in original) (citations omitted). Obviousness cannot be predicated on what is not known at the time an invention is made, even if the inherency of a certain feature is later established. *In re Rijckaert*, 9 F.2d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993).

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is ***necessarily present*** in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be

established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) (emphasis added).

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

As previously noted, neither Cimecioglu nor Smith teach or suggest fluffing its aldehyde-modified cellulosic fibers. Both Cimecioglu and Smith do not teach or suggest fluffing its pulp in order to obtain improved wicking rate and capacity, improved structural integrity, and/or improved absorbent capacity. Instead, both Cimecioglu and Smith teach aldehyde-modified pulp for improving paper strength. Such application does not require the fluffing of its pulp. Therefore, the step of fluffing the pulp in the method of the present invention would not inherently be found within Cimecioglu or Smith. Finally, as noted above, just because Smith mentions in passing that its fibers can be used in absorbent products, one still does not know where in those products the fibers are used, and therefore it cannot be said that Smith inherently teaches fluffing its fibers. For at least these reasons, neither Cimecioglu nor Smith, alone or in combination, render the presently claimed invention obvious.

The present invention is directed towards a **method** of making a modified fluff pulp product that has an increase in wicking rate and wicking capacity compared to an unmodified fluff pulp. This method of manufacture requires that the fibers of the product be fluffed. As the products of the cited art are directed towards paper strength, an application that does not require the step of fluffing its fibers during manufacture, it cannot be said that the step of fluffing the fibers is inherent in the art. For at least these reasons, the step of fluffing the treated cellulose pulp is not inherent in the art. Therefore, an increase in wicking rate and wicking capacity cannot be inherent in the art.

Jaschinski teaches a method of producing metal-crosslinkable oxidized cellulose-containing fibrous materials. The inventive products of Jaschinski are created from oxidized fibers that have been crosslinked with metal for improved paper strength. In contrast, the present

invention addresses the need for absorbent articles without crosslinked fibers. Jaschinski does not address non-crosslinked fibers.

Further, the invention of Jaschinski is directed towards improving paper strength, and provides no support or teaching that those products would improve wicking rate and wicking capacity, structural integrity, absorbent capacity, and/or odor absorption as claimed. Accordingly, Jaschinski does not teach or suggest each and every element of the presently claimed invention.

Further, even if one skilled in the art were motivated to combine Cimecioglu with Jaschinski, one so skilled would believe that they would have to crosslink their aldehyde-modified cellulose product (from Cimecioglu) with a metal (from Jaschinski) to get the alleged absorbency characteristics. Such crosslinked products are not the same as the claimed products and processes of the present invention. Such crosslinked products do not require being fluffed. Also, neither Cimecioglu nor Jaschinski provide any teaching regarding improved wicking rate and wicking capacity, structural integrity, absorbent capacity, and/or odor absorption. For at least these reasons, neither Cimecioglu nor Jaschinski, alone or in combination, teach or suggest the presently claimed invention.

It is believed that these remarks overcome the Examiner's rejection of claims 1 and 3-27 as being unpatentable over Cimecioglu in view of Smith or Jaschinski under 35 U.S.C. § 103(a). Withdrawal of the rejection is respectfully requested. Allowance of the claims is believed to be in order, and such allowance is respectfully requested.

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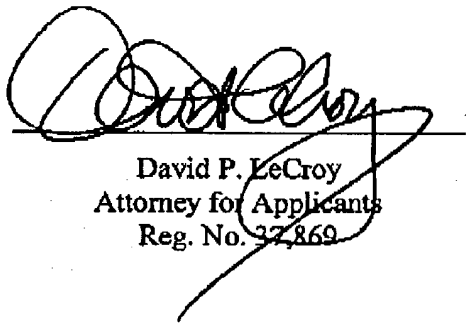

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